

Training to competence and beyond:

Evaluation of a standardized training program for establishing and maintaining competence in early aspiration abortion care

Amy Levi, CNM, WHNP, PhD
Diana Taylor, RNP, PhD
Jeffrey Waldman, MD, PPFA
Molly Battistelli, BA
Deborah Karasek, MPH
Tracy Weitz, PhD, MPA

Objective

Initial training and maintenance of clinical competence is essential to effective and safe patient care. As part of the Health Workforce Pilot Project #171 in California, a combination of self-directed didactic learning and precepted clinical skill development has been used to expand the skill set of nurse practitioners (NPs), nurse midwives (CNMs), and physician assistants (PAs) to include manual and electric vacuum aspiration.

As part of the project, we are testing a standardized competency-based curriculum and training plan. We have used a variety of evaluation methods to ensure that the curricular tools and clinical experiences that have been provided to the trainees produce the expected clinical competency for safe, effective practice.

Methods

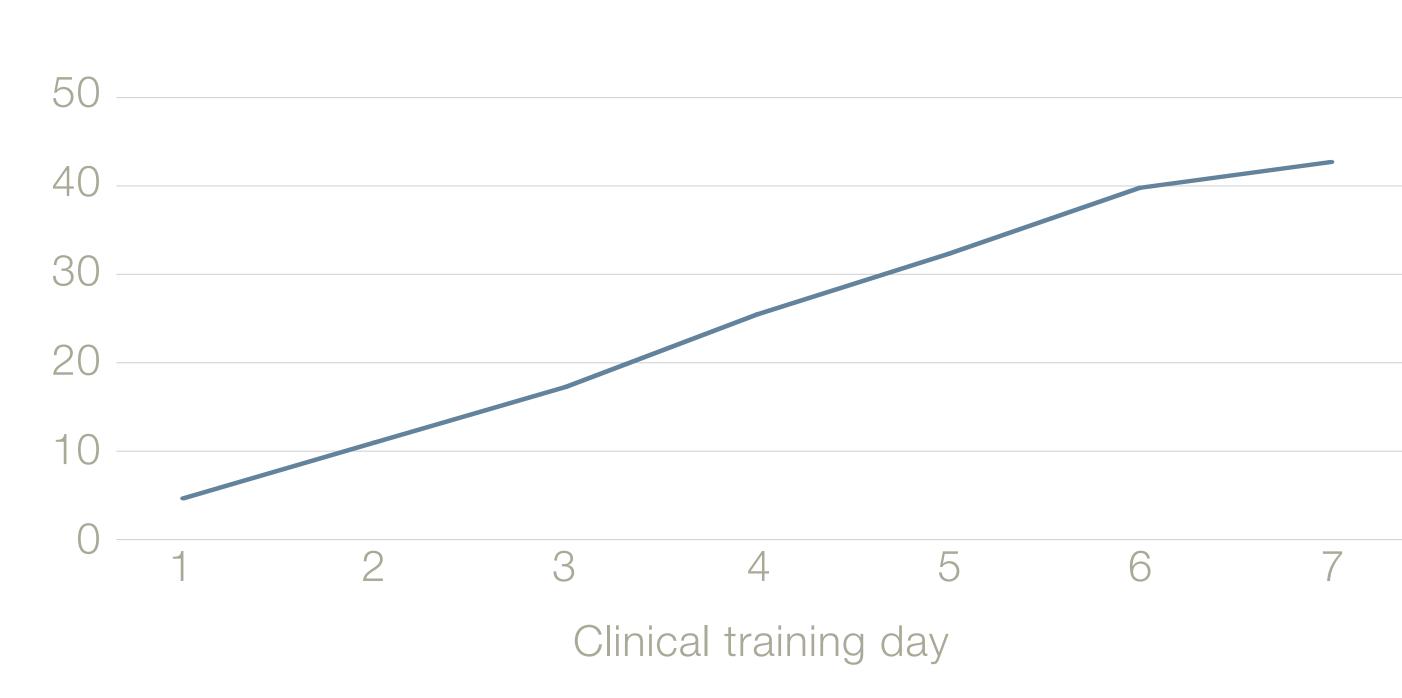
Knowledge attainment is measured by written exam after completion of a case-based curriculum. Each trainee completes a minimum of 40 procedures over 6 clinical days under direct physician trainer supervision. Daily and final competency assessments on patient comfort, procedural completeness, speed, and ability to identify problems are completed by both the trainer and trainee.

We analyzed data from patient procedures throughout clinician training and practice phase to evaluate the safety of abortion provision as clinical competency progresses. Analysis of complications was used to identify concerns about clinician safety.

Results

Thirty-nine clinicians have been trained to competence since August, 2007: 27 NPs, 5 CNMs, and 7 PAs representing an average practice experience of 12.5 years. All trainees achieved a score of 90% or greater on a short answer test of the didactic curricular content; they were rated as competent by their physician trainers with an average of 45 (range 40-61) procedures performed over 6.9 (range 6-10) training days. Most trainees (90%) completed their clinical training requirements in 7 days or less.

Average number of procedures completed by end of training (n=39 trainees)

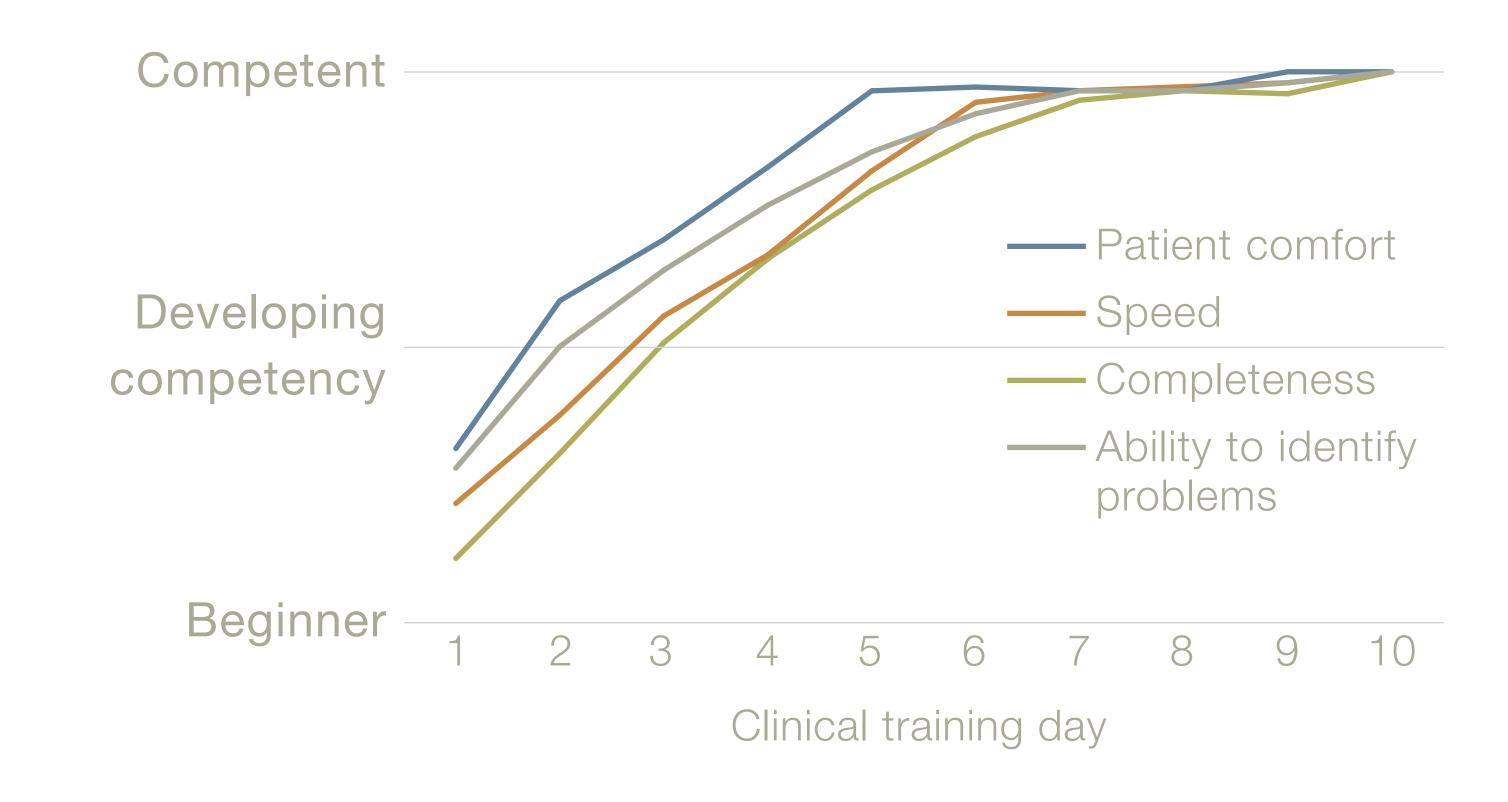


As expected, clinicians develop a beginning level of competence across the four domains with increasing experience. Confidence as rated by both trainers and clinicians averaged 6 on a 1-9 scale by the end of the 6th training day, lagging behind competency ratings.

Competence and confidence in providing for patient comfort is achieved first, as this factor is the foundation of all patient care. Speed in completing the abortion procedure, along with competence in complete uterine evacuation, is more variable and depends on the clini-

cian's knowledge and skill with other intrauterine and pregnancy-related procedures. Alternately, clinicians become more confident in their emergency management skills as they learn to diagnose and treat immediate problems such as hemorrhage and hematometra and to manage post-abortion problems such as an incomplete or failed abortion in family planning clinics.

Acquisition of procedural skills by NP, CNM and PA trainees (n=39 trainees)



Cumulatively, 39 trainees have provided 6,951 procedures with a mean patient satisfaction rate of 9.4 on a 10-point scale. The rate of abortion-related complications—defined as cases where there is a confirmed diagnosis of incomplete abortion, failed abortion, hemorrhage/excessive bleeding, hematometra, infection, cervical injury, uterine perforation, anesthesia-related complication, symptomatic intrauterine material or SIM (a new category of distressing post-abortion pain/bleeding that does not qualify as other diagnoses), or an "other" diagnosis determined by the HWPP #171 Data and Clinical Safety Monitoring Committee (DCSMC) to be abortion-related—is 1.6%.

Summary of NP/CNM/PA incidents (n=6,951 procedures)

Total	1.9%	132
Abortion-related complication	1.6%	107
Non-abortion-related incident	0.3%	19
System incident	0.1%	6
Incident classification*	%	n

*Abortion-related complications are distinguished from "system" incidents, in which a patient self-refers to an ER but receives no treatment, and "concurrent" incidents such as a pre-existing medical condition found during abortion care.

Conclusions

A combination of self-directed didactic learning and precepted clinical skill development following a standardized, competency-based curriculum is an acceptable method for adding manual and electric uterine vacuum aspiration skills to the practice of nurse practitioners, nurse midwives, and physician assistants.

Increasing access to first trimester abortion care demands an increase in the number of available providers.

NPs, CNMs and PAs represent an underutilized resource for expanding access to abortion care, and a competency-based training program can successfully prepare them for providing this service.

Ongoing monitoring of complication rates as these clinicians continue to practice will provide more data to evaluate the success of these teaching methodologies longitudinally and help us to identify essential factors for maintaining clinician competency and confidence.